



FIG. 1

0698E07- J000

FIG. 2

00000T" 20966960

PROGRAM DATABASE - 300

	DATE/TIME <u>340</u>	CHANNEL <u>345</u>	TITLE <u>350</u>	GENRE <u>355</u>	...	RECOMMENDER SCORE <u>370</u>
305	11/18/99 -- 8:00 P.M.	CH 1	LUCY	COMEDY		55
310	11/18/99 -- 8:30 P.M.	CH 1	AL'S FAMILY	SITCOM		78
	...					
320	11/18/99 -- 9:00 P.M.	CH 3	YOUR HOUSE	DRAMA		96

FIG. 3

HISTORICAL SEARCH DATABASE - 400

	ATTRIBUTE-VALUE PAIR <u>450</u>	NUMBER OF TIMES UTILIZED IN A QUERY <u>460</u>
405	GENRE: COMEDY	
410	GENRE: DRAMA	
...		
415	GENRE: SITCOM	
...		

FIG. 4

```

graph TD
    500([AUTOMATIC QUERY GENERATION PROCESS  
500]) --> 510{AUTOMATIC QUERY COMMAND RECEIVED  
FROM USER?  
510}
    510 -- YES --> 520[OBTAIN ELECTRONIC PROGRAM GUIDE (EPG) 110  
520]
    510 -- NO --> 500
    520 --> 530[RETRIEVE TOP-N ATTRIBUTE-VALUE PAIRS FOR  
EACH ATTRIBUTE FROM HISTORICAL SEARCH  
DATABASE 400  
530]
    530 --> 540[CONSTRUCT AUTOMATIC QUERY  
540]
    540 --> 550[COMPARE ATTRIBUTES OF EACH PROGRAM IN  
INDICATED TIME INTERVAL IN EPG TO ATTRIBUTE-  
VALUE PAIRS SPECIFIED IN AUTOMATIC QUERY  
550]
    550 --> 560[RETURN SEARCH RESULTS TO USER  
560]
    560 --> 570[DECOMPOSE SEARCH TERMS AND INCREMENT  
CORRESPONDING COUNTS IN HISTORICAL SEARCH  
DATABASE 400  
570]
    570 --> END([END])

```

**FIG. 5**